

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A signal processing system ~~having comprising~~ at least two independent processing channels, a plurality of optical fibres with their one ends oriented to receive electromagnetic radiation, and couplers interconnecting the other ends of ~~the said~~ optical fibres in parallel ~~such that whereby~~ electromagnetic radiation transmitted by ~~the said~~ optical fibres ~~will be is~~ coupled together and then directed into each of the independent processing channels.
2. (currently amended) A signal processing system, according to Claim 1, in which at least one of ~~the said~~ independent processing channels includes a processing board with an output to a signal detector.
3. (currently amended) A signal processing system, according to Claim 2, in which at least one of ~~the said~~ processing boards includes ~~electrical and/or optical~~ signal processing components. ~~selected from the group comprising electrical and optical signal processing components.~~
4. (currently amended) A signal processing system, according to ~~any preceding claim, Claim 1,~~ in which at least one of ~~the said~~ independent processing channels

is arranged to transmit the electromagnetic radiation in sequence to a signal detector input.

5. (currently amended) A signal processing system, according to Claim 4, in which another of said independent processing channelchannels is arranged to transmit the electronic radiation in sequence to another signal detector input, and thesaid independent processing channels incorporate different optical delays to minimise any range/position ambiguity.
6. (currently amended) A signal processing system, according to Claim 1, in which one of thesaid independent processing channels is arranged to transmit electromagnetic radiation in sequence to a signal detector unit, and another of said independent processing channelchannels is arranged to transmit the electromagnetic radiation to a processing board configured to assess the range and depth of a target.
7. (currently amended) A signal processing system, according to any preceding claimClaim 1, in which two of said independent processing channels contain different signal detectors.

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8. (currently amended) A signal processing system, as in ~~any preceding claim~~
Claim 1, in which at least one of ~~the said~~ independent processing channels is
arranged to feed signals into at least one other independent processing channel.

Claim 9 cancelled.